

REMARKS/ARGUMENTS

1. The Examiner rejected claim 1 under 35 U.S.C. 102(b) as being anticipated by Leonard (3,728,931).

The Examiner stated: "Regarding claim 1, Leonard discloses a piano key finder and chord indicator (Figs. 1 and 3) comprising means for displaying alphabetic representation of a chromatic scale (28, 29) associated with a selected musical key; means for displaying alphabetic representation of major and minor chord (40, 42) associated with said selected musical key; means for indicating piano keys (36, 38) associated with the chromatic scale associated with said selected key."

The Applicant respectfully traverses this rejection. Leonard is definitely not a piano key finder and chord indicator. The Leonard invention is simply an intervalometer. See Title. That is it calculates the notes which are at set intervals from any root note. Musical intervals depend on whether one is playing a major or minor key but are independent of the exact key that is being played. See column 1, lines 38-47. The intervals between notes vary by a half step depending on what note one starts on and whether one is playing in a major or minor key.

Also, Leonard does not have a means for displaying alphabetic representation of a chromatic scale associated with a selected musical key. The Examiner found reference numbers for the a scale but he could find no reference numbers or citations for association with a selected musical key. In doing so the Examiner missed a major part of the instant invention.

Reference numbers 28 and 30¹ are representations of a chromatic scale with their associated alphabetic representations. They may be called displays of a chromatic scale but they are certainly not means for doing anything. Moreover, they are not associated in any way with a key. In sharp contrast, in the instant invention, only some of the markings 17 on the slide 110 are visible through the openings 100 in the sleeve 55. The visible markings 17 are alphabetic

¹ The Examiner said "29" but there is no reference number "29" so the Applicant presumes that the Examiner meant reference number "30", which makes sense.

representations of the notes in a major scale 20² and the notes in a major 35 and minor 40 triad associated with a particular key 25. As the slide 110 is moved through the sleeve 55 the letters 17 in the windows 100 change to indicate the notes in a major scale 20 and the notes in a major 35 and minor 40 triad associated with a different key 25. Thus the instant invention does possess a means for displaying alphabetic representation of a chromatic scale associated with a selected musical key.

Moreover, Leonard does not have a means for indicating piano keys associated with the chromatic scale associated with said selected key. The reference numbers cited by the Examiner (36, 38) are simply a row of boxes with alphabetical annotations of all the natural notes.

Although there are boxes for them, no sharp or flat notes are noted in any of the boxes. On a piano keyboard the white keys are the natural notes and the sharp and flat keys are black and set back from the white keys. There are no spaces between the natural keys for the sharp and flat keys. Just such a representation 95 is shown on the instant invention. In addition the piano keys that are pressed in order to play the indicated scale are indicated with markings 140 on the slide 110 visible through the openings 105 of the sleeve 55. Thus the instant invention does have a means for indicating piano keys associated with the chromatic scale associated with said selected key.

Finally, the Leonard invention is constructed entirely differently from the instant invention. In Leonard, the holder 10 is a sheet folded essentially in half. Consequently, it is only joined along one edge 16. In contrast the sleeve 55 of the instant invention is joined along two edges 70, 75. Also, there are no openings in Leonard's holder 10, Leonard's slide 12, 14 juts sideways out of the holder 10, and the markings 46, 42 on the slide 12, 14 are outside of the area covered by the holder 10. See Figures. In contrast, the slide 110 of the instant invention does not just sideways out of the sleeve 55, which has at least one set of openings 100, and the markings 17 are within the area covered by the sleeve 55. See Figures. Consequently, Leonard's invention works like a

² In the instant invention, the scale is called "chromatic" but this must mean a major scale. This can be determined from the illustrations where the 7 notes of a major scale are clearly visible and not the 11 notes of a chromatic scale.

slide rule whereby markings 46, 42 on the slide 12, 14 are aligned with markings 28, 30 on the holder 10. See Figures. The instant invention does not work like a slide rule.

2. The Examiner rejected claims 2-3, 6, and 14 under 35 U.S.C. 103(a) as being unpatentable over Nelson (4,960,029) in view of Leonard.

The Examiner stated: "Regarding claims 2 and 3, Nelson discloses a piano key and chord indicator comprising an outer sleeve (23 in Fig. 2), an interior cavity (Fig. 2 shows an interior cavity for a slider member 12); first and second sets of openings (28, the openings above and below window 32 shown in Fig. 1); a slider member (12) and means (14, 16) for preventing the slider member from being removed from the outer sleeve; said slider member having a first portion (18) and a second portion (20); said first portion carrying alphabetic representations (Figs. 3-5) being sized and shaped to be visible through said first set of openings in said outer sleeve (Fig. 1); said second portion having a first series of markings (Figs. 3-5) being sized and shaped to be visible through said second set of openings in said outer sleeve.

The difference between Nelson's indicator and claim 2 is that claim 2 recites said outer sleeve having a representation of a portion of a piano keyboard, indicating piano keys with the chromatic scale associated with said selected musical key.

Leonard teaches an outer sleeve (10 in Fig. 3) having a representation of a portion of a piano keyboard (38), indicating piano keys with a chromatic scale (30) associated with a selected musical key for teaching a student to identify positional relationship of the tones in different scales (col. 1, lines 38-45). It would have been obvious to one having ordinary skill in the art to modify Nelson's indicator as taught by Leonard to include said outer sleeve having a representation of a portion of a piano keyboard, indicating piano keys with the chromatic scale associated with said selected musical key for the purpose of teaching a student to identify positional relationship of the tones in different scales.

The rest of the claim is the intended use of the indicator that does not carry any patentable weight. Further, the combination of the references teaches the same."

The Applicant respectfully traverses this rejection. The Leonard invention is simply an intervalometer. See Title. That is it calculates the notes which are at set intervals from any root note. Musical intervals depend on whether one is playing a major or minor key but are independent of the exact key that is being played. See column 1, lines 38-47. The intervals between notes vary by a half step depending on what note one starts on and whether one is playing in a major or minor key.

The Leonard invention does not have a representation of a portion of a piano keyboard (38), indicating piano keys with a chromatic scale (30) associated with a selected musical key. The reference number cited by the Examiner (38) is simply a row of boxes with alphabetical annotations of all the natural notes. Although there are boxes for them, no sharp or flat notes are noted in any of the boxes. On a piano keyboard the white keys are the natural notes and the sharp and flat keys are black and set back from the white keys. There are no spaces between the natural keys for the sharp and flat keys.

Also, Leonard does not have an indication of a chromatic scale (30) associated with a selected musical key. Reference number 30 is a representation of a chromatic scale with its associated alphabetic representations but it is not associated in any way with a scale. Nowhere in Leonard is there any mention of any association of the chromatic scale with a key. In sharp contrast, in the instant invention, only some of the markings 17 on the slide 110 are visible through the openings 100 in the sleeve 55. The visible markings 17 are alphabetic representations of the notes in a major scale 20² and the notes in a major 35 and minor 40 triad associated with a particular key 25. As the slide 110 is moved through the sleeve 55 the letters 17 in the windows 100 change to indicate the notes in a major scale 20 and the notes in a major 35 and minor 40 triad associated with a different key 25. Thus the instant invention does have an indication of a chromatic scale associated with a selected musical key.

Consequently, this rejection is fatally flawed and the prior art cannot be combined as stated by the Examiner.

3. The Examiner stated: "Regarding claim 6, Nelson discloses the second set of openings in the outer sleeve are of a first predetermined shape (Fig. 1)."

It is well known that dependent claims contain all the limitations of the claims from which they depend. Claim 6 depends from Claim 2. Since the rejection of Claim 2 has been traversed, the rejection of Claim 6 also stands traversed for the same reasons.

4. The Examiner stated: "Regarding claim 14, it is obvious to one of ordinary skill in the art that the combination of references teach the method steps. See above reasoning."

The Applicant has already traversed rejections based on Leonard and the combination of Nelson and Leonard. Therefore, the rejection of Claim 14 also stands traversed.

5. The Examiner rejected claim 5 under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Leonard as applied to claims 1 and 2 above, and further in view of Winn (5,731 ,572).

The Examiner stated: "Regarding claim 5, Nelson in view of Leonard disclose the claimed invention except that at least one finger notch being disposed at either of said first and second ends of said outer sleeve.

Winn teaches at least one finger notch (38) being disposed at either of first and second ends of an outer sleeve (22) for allowing a user to more easily grasp a sliding member (20) (col. 4, lines 1-5). It would have been obvious to one having ordinary skill in the art to modify Nelson in view of Leonard's indicator as taught by Winn to include at least one finger notch being disposed at either of said first and second ends of said outer sleeve for the purpose of allowing the user to more easily grasp a sliding member."

Again, dependent claims contain all the limitations of the claims from which they depend. Claim 5 depends from Claim 2. Since the rejection of Claim 2 has been traversed, the rejection of Claim 5 also stands traversed for the same reasons. Also, the Winn invention is in the field of statistics whereas the instant invention is in the field of music. An inventor in the field of music

would not look to the field of statistics to find solutions to musical problems. This is another reason why the combination of Nelson, Leonard and Winn is nonobvious.

6. The Examiner rejected claims 10 and 19 under 35 U.S.C. 103(a) as being unpatentable over Nelson in view of Leonard as applied to claims 1 and 2 above, and further in view of Rackow (6,323,410).

The Examiner stated: "Regarding claim 10, Nelson in view of Leonard disclose the claimed invention except that the first series of markings are of a first predetermined color.

Rackow teaches a first series of markings (Fig. 1) are of a first predetermined color (col. 3, lines 65-66) for contrasting the major key (col. 3, lines 64-6). It would have been obvious to one having ordinary skill in the art to modify Nelson in view of Leonard's indicator as taught by Rackow to include the first series of markings are of a first predetermined color for the purpose of contrasting the major key."

Again, dependent claims contain all the limitations of the claims from which they depend. Claim 10 depends from Claim 2. Since the rejection of Claim 2 has been traversed, the rejection of Claim 10 also stands traversed for the same reasons.

7. The Examiner stated: "Regarding claim 19, it is obvious to an ordinary skill in the art that the combination of the references teach the method of providing the first set of markings in a first predetermined color."

The Applicant has already traversed rejections based on Leonard and the combination of Nelson and Leonard and Rackow. Therefore, the rejection of Claim 19 also stands traversed.

8. The Examiner objected to claims 4, 7-9, 11-13, 16-18, and 20-22 as being dependent upon a rejected base claim, but stated they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner stated: "The claims are allowable over the prior art for at least the reason that the prior art fails to reasonably teach or suggest in claim 4 that first and second enlarged end sections, said enlarged end sections being attached at said first and second ends of said slide member, in claims 7, 16, and 20 that a third set of openings in said outer sleeve, said third set of openings being disposed upon said representation of a portion of a piano keyboard, in claims 8-9, 17-18, and 21-22 that a fourth set of openings in said outer sleeve, said fourth set of openings being disposed upon said representation of a portion of a piano keyboard, in claims 11 that a fifth set of openings in said outer sleeve, said fifth set of openings being disposed upon said representation of a portion of a piano keyboard, in claim 12 that that a sixth set of openings in said outer sleeve, said sixth set of openings being disposed upon said representation of a portion of a piano keyboard, in claim 13 that a fifth and sixth set of openings in said outer sleeve, said fifth and sixth set of openings being disposed upon said representation of a portion of a piano keyboard, as set forth in the claimed combination."

Applicant has amended the application to add new claims 23-32. These claims were constructed as follows:

Claim	Combination of claims	Dependent from claim	Equivalent to claim
23	2, 3 & 4	-	-
24	2, 6 & 7	-	-
25	-	24	8
26	2, 10 & 11	-	-
27	-	26	12
28	-	27	13
29	14, 15 & 16	-	-
30	-	29	17
31	14, 19, 20	-	-
32	-	31	21

These claims overcome the Examiner's objections and are therefore allowable.

An additional fee of \$ 750 is due on account of the above amendments. See attached Patent Application Fee Determination Record. A credit card authorization for this amount is attached. Reconsideration of this application and its early allowance are respectfully requested in view of the above presented amendments and remarks.

Respectfully submitted,



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